

Amendment and Response  
Attorney Docket No. NXL-001  
U.S. Serial No. 10/825,883  
Page 6

### **REMARKS**

Applicant thanks the Examiner for the courtesy of a telephone interview on August 1, 2006. The Examiner and Applicant's representative, William Guerin, discussed the English translation of German patent document no. DE 19952139 to Weiner (hereafter "Weiner") with respect to the rejection of independent claim 14 under 35 U.S.C. 102(b) according to the Office Action mailed March 8, 2006.

Claims 14-19, 21 and 22 were presented for examination. The Office Action rejects claims 14-19, 21 and 22. This paper amends claims 14-18 and adds new claims 23-29. Claims 14-19 and 21-29 are pending in the application.

### **Rejection of Claims 15-18 under 35 U.S.C. § 112**

The Office Action rejects claims 15-18 under 35 U.S.C. §112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which Applicant regards as the invention.

The Office Action states that claim 15 is indefinite because it is not clear how the "plastic substrate" differs from the "supporting component", if at all. Applicant points out that the plastic substrate is one layer of the claimed device upon which another layer (i.e., the micro-pattern embedded plastic optical film) is disposed. Applicant has amended claim 15 herein to recite a "base film" in place of the "plastic substrate" for clarity. Support for this amendment can be found at least at page 9, lines 13-17, page 11, lines 14-17 and FIG. 4 in the originally-filed specification.

The Office Action states that "said supporting components" in claim 16 lacks antecedent basis. Applicant herein has amended claim 16 to change this language to "said supporting component" for proper antecedent basis. Applicant submits that claims 16-18 now have proper antecedent basis for all terms in these claims.

Amendment and Response  
Attorney Docket No. NXL-001  
U.S. Serial No. 10/825,883  
Page 7

In an additional matter, Applicant herein has amended the preamble to claims 15-18 to recite "a device" instead of "an apparatus" to be consistent with the preamble of independent claim 14 from which these claims depend.

**Rejection of Claims 14, 16, 21 and 22 under 35 U.S.C. § 102(b)**

The Office Action rejects claims 14, 16, 21 and 22 under 35 U.S.C. §102(b) as being anticipated by German patent document no. DE 19952139 by Weiner (hereafter "Weiner"). Applicant respectfully traverses the rejection to the extent it is maintained against the claims as amended because the cited reference does not teach or suggest each and every element of Applicant's claimed invention.

Applicant's invention relates to a micro-pattern embedded optical film for cell-based assays. The optical film includes microscopically observable regions formed by contrast features. Each region includes a unique identifier. The film is attached to at least one supporting components which provide mechanical strength for handling either manually or robotically. Additionally, the supporting component forms one or more volumes for holding a liquid containing the cells to be observed and also provides liquid containment for chemical reagents necessary for the cell-based assays. Supporting components can be manufactured from various materials such as plastic, glass or metal using various techniques, such as injection molding, die-cutting or laser sheet cutting. Advantageously, the cost for fabricating a device for cell-based assays employing the optical film is small in comparison to the cost for conventional devices employed for cell-based assays. Moreover, unlike conventional grids used in similar measurements, the contrast features of the micro-pattern embedded optical film do not adversely influence the growth of cells due to their small depth or height. In addition, a user of the device of the invention can observe the cells and the contrast features simultaneously, i.e., without the need to refocus.

Applicant's invention, as now set forth in representative independent claim 14, recites "a supporting component bonded to said micro-pattern embedded plastic optical film to form a volume for holding a liquid having said cells".

Amendment and Response  
Attorney Docket No. NXL-001  
U.S. Serial No. 10/825,883  
Page 8

Weiner teaches an optical carrier, such as a microscope slide, on which a film having a linear grid is mounted. Unlike Applicant's claimed invention, the film is disposed on a side of the carrier opposite the side on which the objects (e.g., cells) to be observed are placed. Weiner teaches that the film does not have to be sterile because the film is on the opposite side of the carrier from the cells and liquid. Because the film is on the opposite side from the cells, the film does not come in contact with the liquid containing the cells and therefore the film, with or without any other structure, cannot be considered to form a volume to hold a liquid having cells. Consequently, Weiner does not disclose or suggest every claimed limitation of the Applicant's invention recited in claim 14. Therefore, Applicant respectfully requests that the rejection be withdrawn. New independent claims 25 and 28 recite language similar to the language in claim 14. Therefore Applicant respectfully submits that these independent claims are also patentably distinguishable over the cited reference for at least those reasons provided in connection with claim 14.

Dependent claims 16, 21 and 22, and new dependent claims 23, 24, 26, 27 and 29 depend directly or indirectly from independent claims 14, 25 and 28, and incorporate all of their respective limitations, and are therefore also patentably distinguishable over the cited reference for at least the reason above.

**Rejection of Claims 15, 17-19, 21 and 22 under 35 U.S.C. § 103(a)**

The Office Action rejects dependent claims 15, 17-19, 21 and 22 under 35 U.S.C. § 103(a) as being unpatentable over the primary reference (Weiner) in view of one of the following secondary references: U.S. Patent No. 5,812,312 to Loreinz, U.S. Patent Publication No. 2002/0072113 to Barbera-Guillem et al., U.S. Patent No. 4,997,266 to Mitchell, Japanese patent document no. JP 2001/017157 to Iwaki Glass, and Japanese patent document no. JP 11/075819 to Uchida et al. The secondary references cited in these rejections are used to provide a limitation introduced in the respective dependent claims that is not disclosed in Weiner. The rejected dependent claims depend directly or indirectly from patentable independent claim 14, and incorporate all of its limitations, and therefore are also patentably distinguishable over the cited

Amendment and Response  
Attorney Docket No. NXL-001  
U.S. Serial No. 10/825,883  
Page 9

references for at least this reason. Moreover, like Weiner, none of the secondary references discloses or suggests a supporting component bonded to the micro-pattern embedded plastic optical film to form a volume for holding a liquid having the cells, as set forth in the Applicant's claimed invention. Applicant therefore respectfully requests the withdrawal of these rejections because the cited references, whether taken alone or in combination, do not disclose, teach or suggest every element and limitation of Applicant's claimed invention.

Amendment and Response  
Attorney Docket No. NXL-001  
U.S. Serial No. 10/825,883  
Page 10

**CONCLUSION**

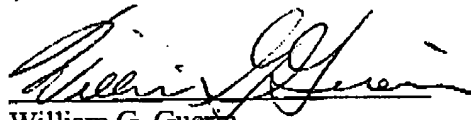
In view of the remarks made herein, Applicant submits that the application is in condition for allowance and request early favorable action by the Examiner.

If the Examiner believes that a telephone conversation with the Applicant's representative would expedite allowance of this application, the Examiner is cordially invited to call the undersigned at (508) 303-2003.

Respectfully submitted,

Date: August 8, 2006  
Reg. No. 41,047

Tel. No.: (508) 303-2003  
Fax No.: (508) 303-0005

  
William G. Guerin  
Attorney for Applicant  
Guerin & Rodriguez, LLP  
5 Mount Royal Avenue  
Marlborough, MA 01752